What is claimed is:

1. A method of regulating an inflammation in a subject comprising:

administering a therapeutically effective amount of a pharmaceutical composition comprising a MANS peptide or an active fragment thereof.

2. The method according to claim 1, wherein said active fragment of the MANS protein comprises at least six amino acids.

3. The method according to claim 1, wherein said inflammation is caused by respiratory diseases, bowel diseases, skin diseases, autoimmune diseases and pain syndromes.

4. The method according to claim 1, wherein said respiratory diseases are selected from the group consisting of asthma, chronic bronchitis, and COPD.

5. The method according to claim 1, wherein said bowel diseases are selected from the group consisting of ulcerative colitis, Crohn's disease and irritable bowel syndrome.

6. The method according to claim 1, wherein said skin diseases are selected from the group consisting of rosacea, eczema, psoriasis and severe acne.

7. The method according to claim 1, wherein said inflammation is caused by arthritis or cystic fibrosis.

8. The method according to claim 1, wherein said subject is a mammal.

9. The method according to claim 8, wherein said mammal is selected from the group consisting of humans, canines, equines and felines.

10. The method according to claim 1, wherein said administering step is selected from the group consisting of topical administration, parenteral administration,

rectal administration, pulmonary administration, nasal administration, inhalation and oral administration.

11. The method according to claim 10, wherein said pulmonary administration is selected from the group of aerosol, dry powder inhaler, metered dose inhaler, and nebulizer.

12. A method for regulating a cellular secretory process in a subject comprising:

administering a therapeutically effective amount of a compound comprising a MANS peptide or an active fragment thereof, that regulates an inflammatory mediator in a subject.

13. The method according to claim 12, wherein said active fragment of the MANS protein comprises at least six amino acids.

14. The method according to claim 12, wherein said regulating a cellular secretory process is blocking or reducing a cellular secretory process.

15. The method according to claim 12, wherein said inflammatory mediator is caused by respiratory diseases, bowel diseases, skin diseases, autoimmune diseases and pain syndromes.

16. The method according to claim 12, wherein said respiratory diseases are selected from the group consisting of asthma, chronic bronchitis, and COPD.

17. The method according to claim 12, wherein said bowel diseases are selected from the group consisting of ulcerative colitis, Crohn's disease and irritable bowel syndrome.

18. The method according to claim 12, wherein said skin diseases are selected from the group consisting of rosacea, eczema, psoriasis and severe acne.

19. The method according to claim 12, wherein said inflammatory mediator is caused by arthritis or cystic fibrosis.

20. The method according to claim 12, wherein said subject is a mammal.

21. The method according to claim 20, wherein said mammal is selected from the group consisting of humans, canines, equines and felines.

22. The method according to claim 12, wherein said administering step is selected from the group consisting of topical administration, parenteral administration, rectal administration, pulmonary administration, nasal administration, inhalation and oral administration.

23. The method according to claim 22, wherein said pulmonary administration is selected from the group of aerosol, dry powder inhaler, metered dose inhaler, and nebulizer.

24. A method of reducing inflammation in a subject comprising:

administering a therapeutically effective amount of a compound that inhibits the MARCKS-related release of inflammatory mediators, whereby mucus secretion in the subject is reduced compared to that which would occur in the absence of said treatment.

25. The method according to claim 24, wherein said compound is an active fragment of a MARCKS protein.

26. The method according to claim 25, wherein said active fragment is at least six amino acids in length.

27. The method according to claim 24, wherein said compound is a MANS peptide or an active fragment thereof.

28. The method according to claim 24, wherein said compound is an antisense oligonucleotide directed against the coding sequence of a MARCKS protein or an active fragment thereof.

29. The method according to claim 28, wherein said active fragment is at least six amino acids in length.

30. The method according to claim 28, wherein both the inflammation and the mucus secretion are both reduced simultaneously.

31. A method of reducing inflammation in a subject comprising:

administering a therapeutically effective amount of a compound that inhibits the MARCKS-related release of inflammatory mediators, whereby the inflammation in the subject is reduced compared to that which would occur in the absence of said treatment.

32. The method according to claim 31, wherein said compound is an active fragment of a MARCKS protein.

33. The method according to claim 32, wherein said active fragment is at least six amino acids in length.

34. The method according to claim 31, wherein said compound is a MANS peptide or an active fragment thereof.

35. The method according to claim 31, wherein said compound is an antisense oligonucleotide directed against the coding sequence of a MARCKS protein or an active fragment thereof.

36. The method according to claim 35, wherein said active fragment is at least six amino acids in length.

37. A method of regulating mucin granule release in a subject comprising:

administering a compound that regulates mucin granule release, whereby mucin granules are reduced as compared to that which would occur in the absence of said mucin granules.

38. The method according to claim 37, wherein said compound is an active fragment of a MARCKS protein.

39. The method according to claim 37, wherein said compound is a MANS peptide.

40. A method of regulating exocytotic secretion of airway mucin granules in a subject comprising:

administering a compound that regulates mucin granule release, whereby mucin granules are reduced as compared to that which would occur in the absence of said mucin granules.

41. The method according to claim 40, wherein said compound is an active fragment of a MARCKS protein.

42. The method according to claim 40, wherein said compound is a MANS peptide.

43. A method of modulating mucus secretion in a subject comprising:

administering a therapeutic amount of an antisense sequence that are complementary to sequences encoding a MARCKS protein or an active fragment thereof, wherein mucus secretion by said cell is inhibited compared to that which would occur in the absence of such administration.

44. The method according to claim 43, wherein said sequence is at least eighteen nucleic acids in length.

45. The method according to claim 43, wherein said compound is complementary to sequences encoding a MANS peptide or an active fragment thereof.

46. The method according to claim 43, wherein said modulating mucus secretion is blocking or reducing mucus secretion.

47. A method of reducing or inhibiting inflammation in a subject comprising:

administering a therapeutically effective amount of a MANS peptide or an active fragment thereof effective to modulate an inflammatory mediator at the inflammation site.

48. The method according to claim 28, wherein said active fragment is at least six amino acids in length.

49. The method according to claim 47, wherein said inflammatory mediators are produced by cells selected from the group consisting of neutrophils, basophils, eosinophils, monocytes and leukocytes.

50. The method according to claim 47, wherein the agent is administered orally, parenterally, cavitarily, rectally or through an air passage.

51. The method of claim 47, wherein said composition further comprises a second molecule selected from the group consisting of an antibiotic, an antiviral compound, an antiparasitic compound, an anti-inflammatory compound, and an immumosuppressant.